

**Amendments to the Specification:**

Please amend the specification as follows:

**Page 16, first full paragraph (lines 6-13)**

Also provided herein are nucleic acid constructs comprising a gene fusion, wherein the gene fusion comprises a first region encoding an oil-body-protein or an active fragment thereof, operably linked to a second region encoding at least one thioredoxin-related protein or an active fragment thereof. In one embodiment, the at least one thioredoxin-related protein can be thioredoxin. The thioredoxin can be selected from the group consisting of SEQ ID NOs:38, 42, 46, 50 and SEQ ID NOs:52-194. The thioredoxin can be obtained from *Arabidopsis* or wheat.

**Page 16, last paragraph (lines 14-31), continuing on page 17 (lines 1-2)**

In another embodiment, the at least one thioredoxin-related protein can be thioredoxin-reductase. The thioredoxin-reductase can be selected from the group consisting of those set forth in SEQ ID NOs:8, 9, 10, 40, 44, 48, 50 and SEQ ID NOs:1 95-313 and/or derived from *Arabidopsis* or wheat. The thioredoxin-reductase can be an NADPH-dependent thioredoxin-reductase. The second region can encode a thioredoxin and thioredoxin-reductase. In one embodiment, the thioredoxin and thioredoxin-reductase is obtained from *Mycobacterium leprae*. In another embodiment, the at least one thioredoxin-related protein can be an engineered fusion protein. The first region can precede, in a 5' to 3' direction, the second region. Alternatively, the first region follows, in a 5' to 3' direction, the second region. The gene fusion can optionally further comprise a third region encoding a second thioredoxin-related protein or an active fragment thereof, operably linked to the first region, or to the second region, or to both. A seed-specific promoter, such as a phaseolin promoter, can be operably linked to the gene fusion. In one embodiment, at least one thioredoxin-related protein is derived from a plant species selected from the group consisting of *Arabidopsis* and wheat. In another embodiment, at least one thioredoxin-related protein can be derived from *E. coil*.

Page 19, last paragraph (lines 30-31), continuing on page 20 (lines 1-14)

Also provided is a nucleic acid construct comprising a gene fusion, wherein the gene fusion comprises a first region encoding an oil-body-protein or an active fragment thereof, operably linked to a second region encoding at least one polypeptide or an active fragment thereof, and an oil-body-surface-avoiding linker in frame between the first and second region polypeptides. Also provided are methods of expressing this construct into the encoded amino acid sequence; and oil bodies, formulations, emulsions, cells, and plants comprising the construct and encoded amino acid sequence. These particular constructs, oil bodies, formulations, emulsions, cells, and plants can be produced according to the methods described herein. The second region can encode any polypeptidized polypeptide, for example, a therapeutically, nutritionally, industrially or cosmetically useful peptide as set forth herein. For example, the second region can encode a redox protein, an immunoglobulin, a thioredoxin-related protein or any one or more recombinant polypeptides of a multimeric-protein-complex.

Page 35, last paragraph (lines 21-31), continuing on page 36 (lines 1-2)

In one embodiment, the first recombinant polypeptide is fused to an oil-body-protein. The methodology is further described in US patent 5,650,554, which is incorporated herein by reference in its entirety. The first recombinant polypeptide may be fused to the N-terminus as well as to the C-terminus of the oil-body-protein (as described in: Moloney and van Rooijen (1996) INFORM 7:107-113) and fragments of the oil-body-protein such as for example the central domain of an oleosin molecule, or modified versions of the oil-body-protein may be used. In this embodiment, the second recombinant polypeptide is expressed intracellularly and then intracellularly associates with the first recombinant polypeptide to form the multimeric-protein-complex in the cell. Oil bodies comprising the multimeric-protein-complex are then conveniently isolated from the cells.

Page 77, last paragraph (lines 28-31), continuing on page 78 (lines 1-8)

In particular embodiments, the oil body formulation is stabilized prior to the addition of further ingredients that may be used to prepare the final product. ~~However~~ However, in other embodiments, it is nevertheless possible to formulate the final formulation using non-

stabilized oil bodies and stabilize the final formulation. The final preparations may be obtained using one or more additional ingredients and any formulation process suitable for the preparation of a formulation comprising oil bodies. Ingredients and processes employed will generally vary depending on the desired use of the final product, will be art recognized and may be as desired. Ingredients and processes that may be used herein include those described in US Patents (US Patents 6,146,645 and 6,183,762) which are incorporated by reference herein.

Page 92, last paragraph (lines 27-31), continuing on page 93 (lines 1-11)

This vector contains the same genetic elements as the insert of pSBS2510 except the Trxh gene is fused to the 5' end of the oleosin gene. The gene. The 3' oleosin coding sequence including its native stopcodon (van Rooijen et al (1992) Plant Mol. Biol. 18: 1177-1179) was furnished with a Hindlll cloning site. Again a gene splicing by overlap extension technique (Horton et al (1989) 15: 61-68) was used to fuse the phaseolin promoter to the Trxh gene and to fuse the Trxh gene to the oleosin sequence. Standard molecular biology laboratory techniques (see eg: Sambrook *et al* (1990) Molecular Cloning, 2<sup>nd</sup> ed. Cold Spring Harbor Press) were again used to clone the Hindlll Kpnl fragment containing the phaseolin terminator (see construction of pSBS2520) downstream of the oleosin gene. The PstI-phaseolin promoter- Trxh oleosin- phaseolin terminator-Kpnl insert sequence was cloned into the PstI-Kpnl sites of pSBS3000. The resulting plasmid is called pSBS2521. The sequence of the phaseolin promoter- Trxh oleosin -phaseolin terminator sequence is shown in SEQ ID NO:19.

Page 97, the heading before the first full paragraph (lines 6-7)

**Polyacrylamide gel electrophoresis and immunoblotting of transgenic seed extracts.**

Page 98, first full paragraph (lines 10-24)

Total seed and oilbody protein extracts from plants transformed with pSBS2510 were loaded onto polyacrylamide gels and either stained with coomassie brilliant blue or electroblotted onto PVDF membranes. The membranes were challenged with a polyclonal antibody raised against *Arabidopsis* thioredoxin, or a monoclonal antibody raised

against the *Arabidopsis* 18.5 kDa oleosin and and visualized using alkaline phosphatase. Expression of the oleosin-thioredoxin results in an additional band of 31.2 kDa. The results indicate that the thioredoxin antibodies are immunologically reactive with a band of the right predicted molecular weight (31.2 kDa), and the oleosin antibodies are also immunologically reactive with a band of the right predicted molecular weight for the fusion protein (31.2 kDa) in addition to a band corresponding to the native *Arabidopsis* oleosin (18.5 kDa). This indicates that oleosin-thioredoxin is expressed in *Arabidopsis* seeds and is correctly targeted to oilbodies.